

## **Executive Summary**

The Hydrilla Program's goals are to eradicate every hydrilla plant from California and to find any new invasion when it is small and easy to eradicate. The Hydrilla Program responded vigorously to new challenges in a couple of existing infestations, even as progress continued in most. Surveys to find new infestations continued, but there is a need to increase efforts in checking small, private ponds. Increased outreach holds the best promise for discovering new infestations there. Surveys revealed no new infestations this year.

Hydrilla is an invasive, non-native water plant and has been called the world's worst submersed weed. It reduces water storage and water movement, chokes water control structures and hydroelectric generators, ruins boating and fishing, damages fish and wildlife habitat, and produces good mosquito habitat. Hydrilla once heavily infested canals in the Imperial Irrigation District in Southern California, where it reduced water flows as much as 85 percent. In highly infested states, such as Florida, control efforts cost tens of millions of dollars each year.

Some of what makes hydrilla such a successful weed are its excellent survival and dispersal capabilities. It breaks apart easily, and fragments no more than one inch long will grow new plants. It also develops "tubers" on its roots. Each tuber produces a new plant, and a single tuber can lead to several hundred new tubers in one season. Tubers survive for four to seven years, presenting a major challenge in eradicating the plant.

### **Key developments of 2007:**

- Hydrilla returned to Clear Lake on July 9 after being absent since June 23, 2003. Treatments in Clear Lake depend solely on herbicides, and the treatments had ended with the 2006 season. The Program's biologists suspected the plants might re-appear and increased the number of boat crews from two in 2006 to three this year. The crews found about 72 "spots" of hydrilla. Most were single plants, but clumps ranged up to several feet across. The finds fell into 33 treatment areas ranging from 3.5 to 56 acres in size, for a total of about 245 acres. The crews responded admirably, searching the entire shoreline of 100+ miles nearly nine times in the five-month season, and treating nearly all plants within a day or two of finding them.
- 2007 was the fifth year in a row where the Program's surveyors could not find any hydrilla in the Chowchilla River / Eastman Lake infestation. They inspected the entire 26-mile length of the project once, and checked historic hot spots twice. This was the second year with no treatments. If the crews can find no hydrilla in 2008, the project will reach the formal criteria for the declaration of eradication.
- The Program's surveyors found no plants for the third year in a row in the fishing resort in Tulare County, and in the two small infestations in Calaveras County. For the first year, no plants were found in any of the three small, recently infested ponds in Nevada County. After more than 100 plants popped up last year in one of the Anderson Park ponds in Shasta County, all those infestations were free of hydrilla this year.
- No new infestations of hydrilla were found in California this year, despite visiting over 250 lakes, ponds, and access points along streams, and surveying over 2100 points in the Sacramento/San Joaquin River Delta.

- A team of 14 staff people received the State's Silver Superior Achievement Award for their work on surveying for the zebra/quagga mussel.

#### **Remaining challenges:**

- Keeping the pressure on Clear Lake. 2006 was the first year where the herbicide pressure on the plant was lifted. The major herbicide we use, fluridone, is effective for a relatively long time. As the herbicide wears off, surviving tubers have the opportunity to grow. The Program responded quickly to the new finds in 2007, implementing the standard protocol. Program biologists are looking into possibilities to directly attack the remaining tubers. Boat crews will expand from three in 2007 to four in 2008, and the Program is buying a new airboat to begin replacing the existing three, which are all over 12 years old.
- Keeping the pressure on the other infestations. Most infestations are responding well to treatments, but the infestation in Yuba County may profit from different methods. The Program is putting a contract in place to line with concrete several thousand feet of the infested canal, which is the headwaters of the infestation.
- More outreach. The last three new infestations in California were found by people outside the Department, in ponds in the Sierra foothills. The foothills are laced with small ponds, most of them private. Two of the infestations were found because of an outreach effort in the surrounding area after the first pond was found. The Program has historically focused on "high risk" areas, meaning places with heavy traffic and public access. The Sierra foothills experience is typical of several other infestations, and demonstrates that the Program needs to generate more invitations to inspect private ponds. The only method to generate more invitations is with outreach. More outreach also means more eyes looking for the target.

Hydrilla was first found in California in 1976, and it has been introduced on 30 separate occasions. The Hydrilla Program has eradicated 22 of those infestations and several other infestations are approaching eradication. The prime requirement for eradication is persistence. A single eradication of a large infestation requires six to 20 years of continuous attention, due to plant's excellent growth, dispersal, and survival strategies. In addition, infestations are easier to eradicate when they are small. Finding small infestations requires routine, vigilant, widespread survey.